



ECDC activities in Epidemic Intelligence.

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Scope of this presentation

- Epidemic Intelligence (EI) activities at ECDC
- Sources of Information
- EPIS: Epidemic Intelligence Information System
- TTT: Threat Tracking Tool
- Challenges



History of Epidemic Intelligence

- Epidemic intelligence service at US-CDC established 1951
- Following start of the Korean War
- Founded by Alexander Langmuir chief for 29 years
- Started as early-warning system against
 - biological warfare and
 - man-made epidemics
- 2 year epidemiology training program for approx. 80 medical doctors, researchers and scientists
- Includes also chronic diseases, environmental diseases and injuries
- Starting point for similar programs all over the world (FETP, TEPHINET, EPIET)

Mission and tasks of ECDC in Epidemic Intelligence



ECDC shall

- Establish, in cooperation with MS, procedures for the identification of emerging health threats
- Identify, assess and communicate current and emerging communicable disease threats
- Inform EC and MS about emerging health threats requiring their immediate attention
- Communicate on emerging health threats, including to the public

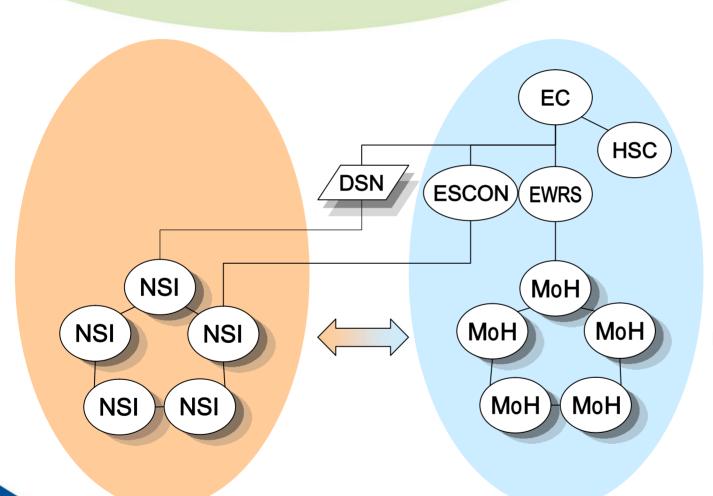


Definitions...

- The systematic collection and collation of information from a variety of sources, usually in real-time, which is then verified and analysed and, if necessary, activates response.
- Main aim is to speedy up detection of potential health threats and provide timeliness response

Public Health Stakeholders Pre-ECDC situation





Ecdc: European Centre for

disease Prevention

and Control

AF: Advisory Forum

NSI: National surveillance

institute

EC: European Commission HSC: Health Security

Committee

EWRS: Early Warning and Response System

ESCON: European surveillance
Committee Network

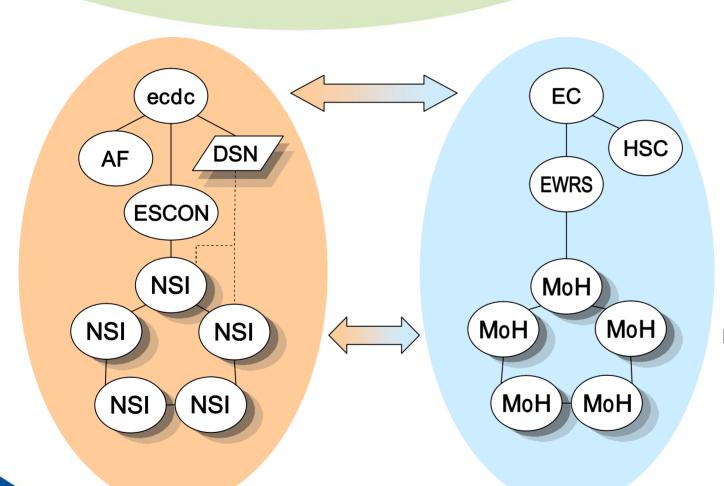
MOH: Ministry of health

NSI: National Surveillance Institute

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Public Health Stakeholders ECDC established





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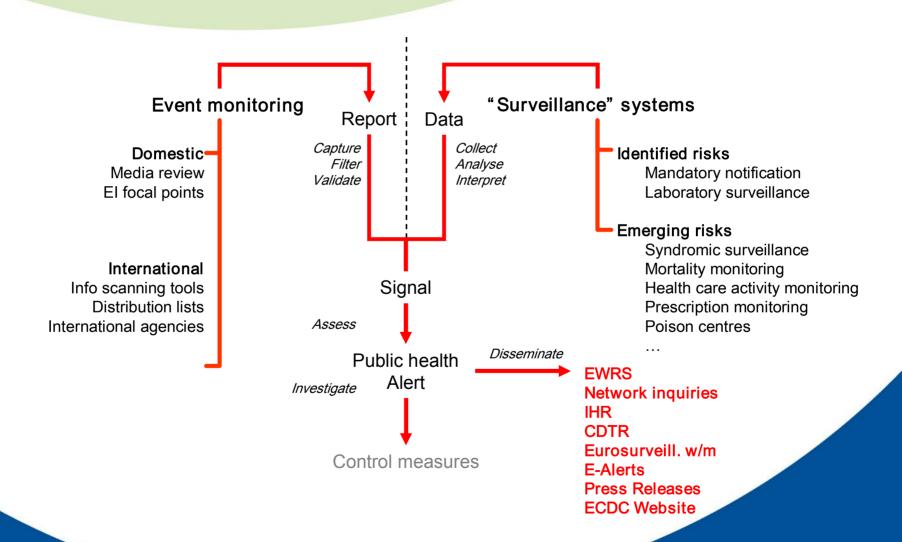
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Epidemic Intelligence Framework



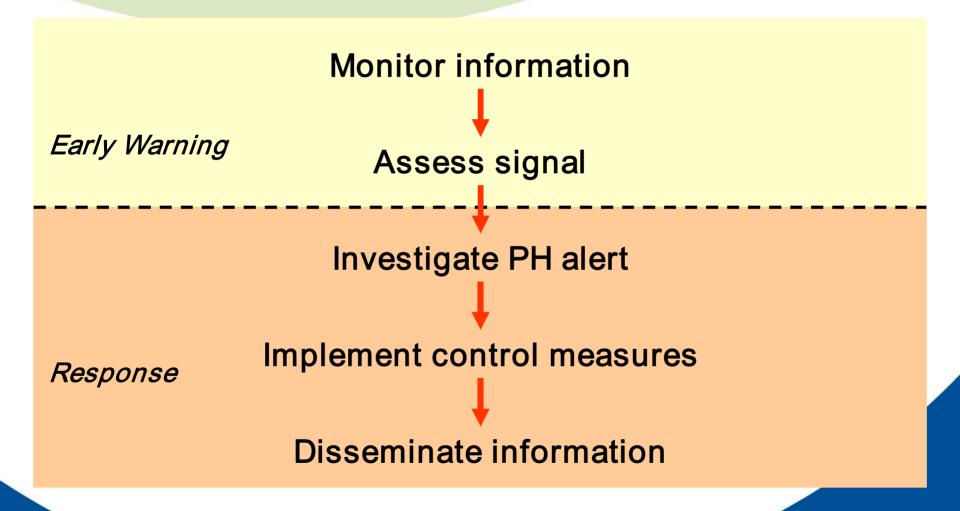


Early Warning & Response Processes

Monitor information Assess signal Investigate PH alert Implement control measures Disseminate information

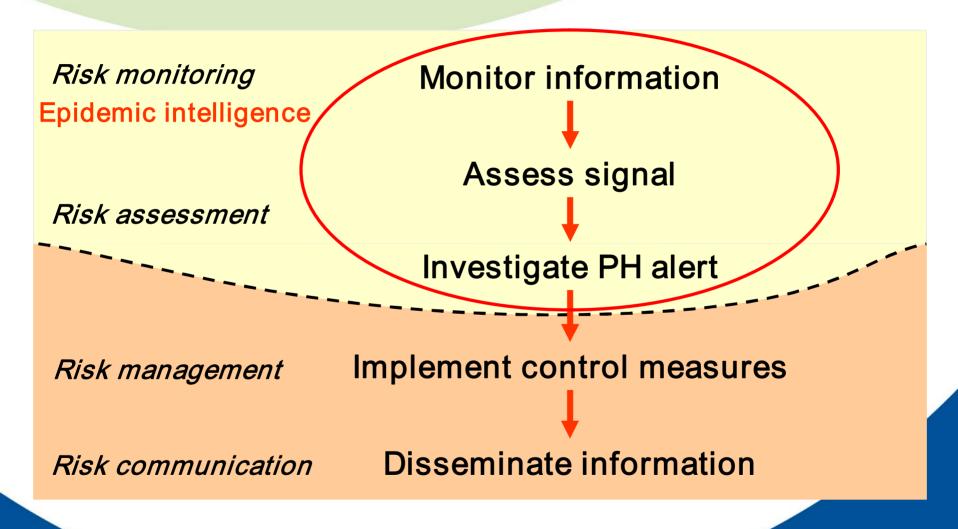


Early warning vs. Response



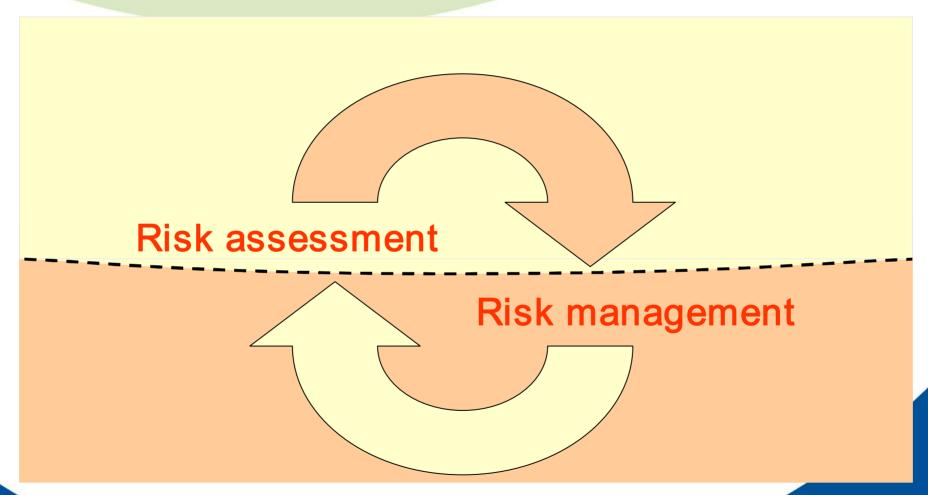


Risk Assessment vs. Risk Management



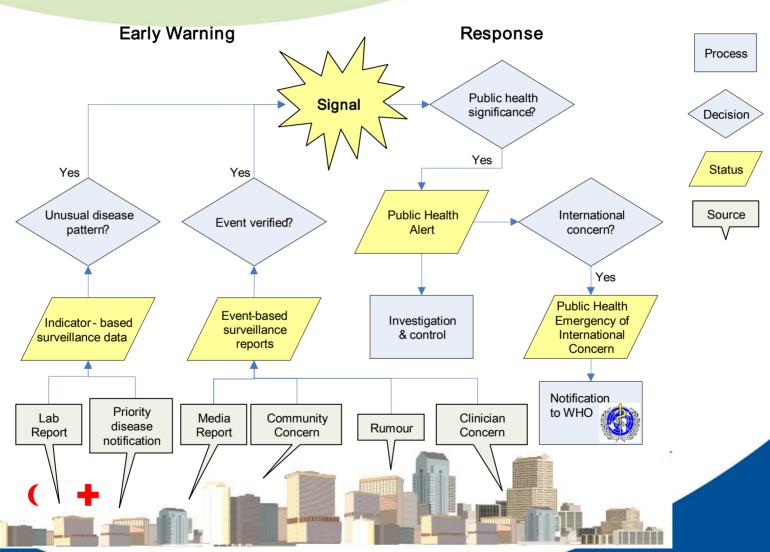


Risk Assessment vs. Risk Management The grey zone...



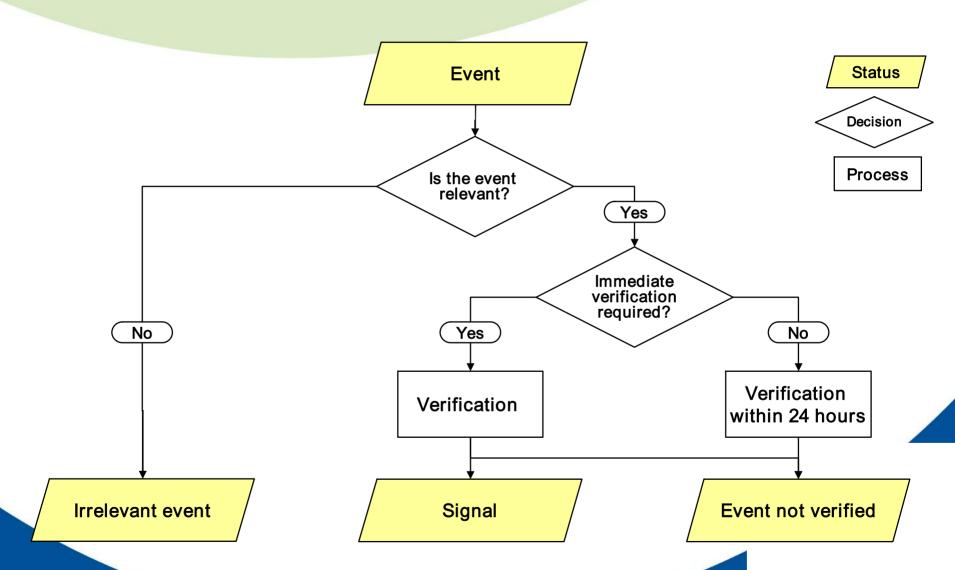


Early Warning Model



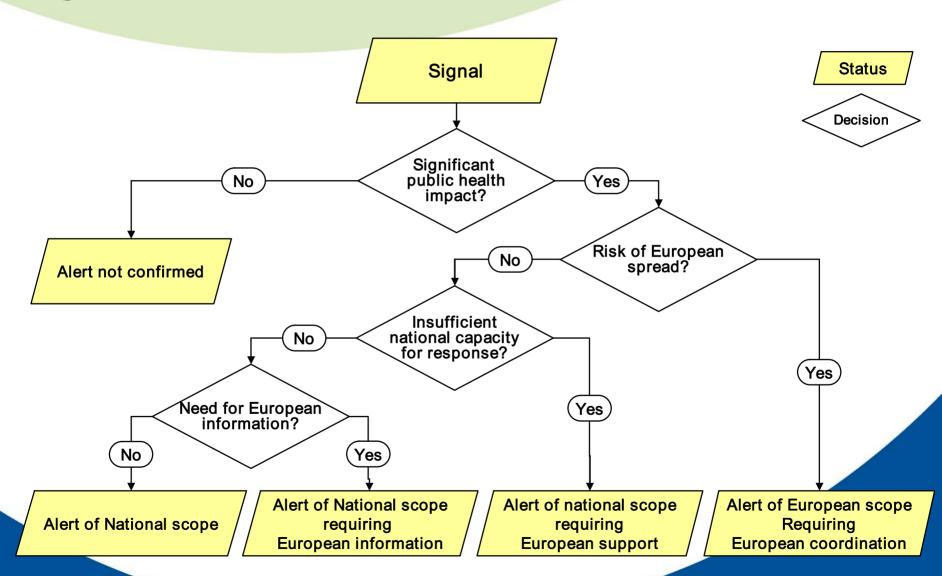


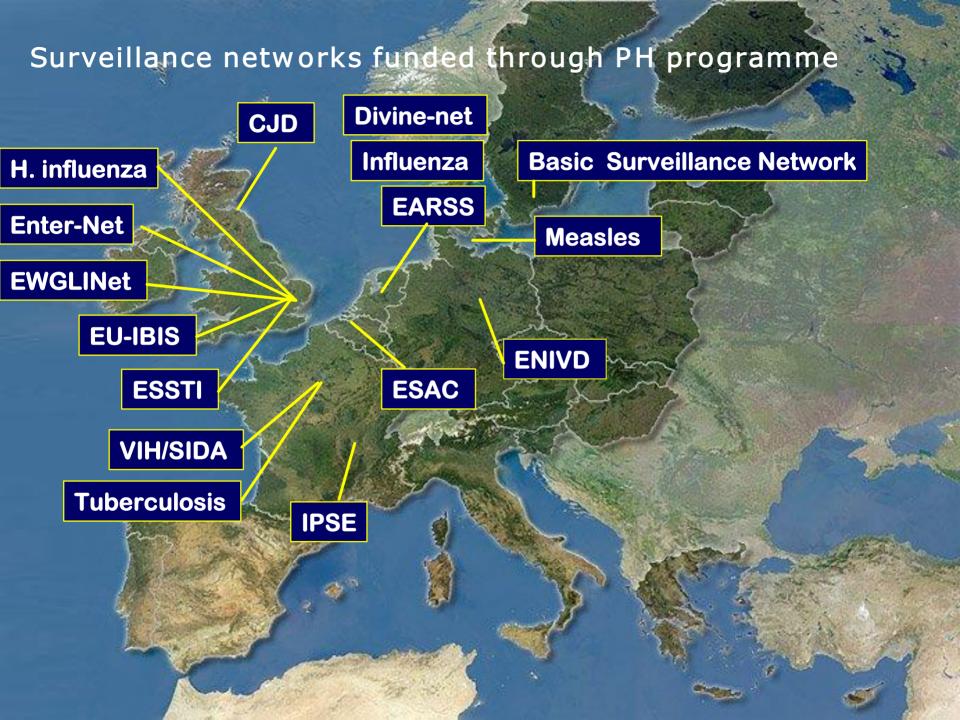
Event verification





Signal assessment









- MS and partner organisations bulletins:
 - National bulletins
 - WHO, CDC, RASFF, EMSA (... etc.) bulletin
- P.H. specialized mailing lists:
 - Confidential (EWRS, MediSys, FWD, GOARN, etc.)
 - Subscription (GPHIN, etc.)
 - Public (Promed, OIE alert ms., GoogleAlert etc.)
- Websites:
 - National P.H. institutes (of EU MS and from abroad)
 - EU PH agencies/projects (Epinorth, Eurosurveillance, ...)
 - International Health agencies (WHO, FAO, OIE, etc.)
 - Internat. news providers (Alertnet, EC press rew., ..)

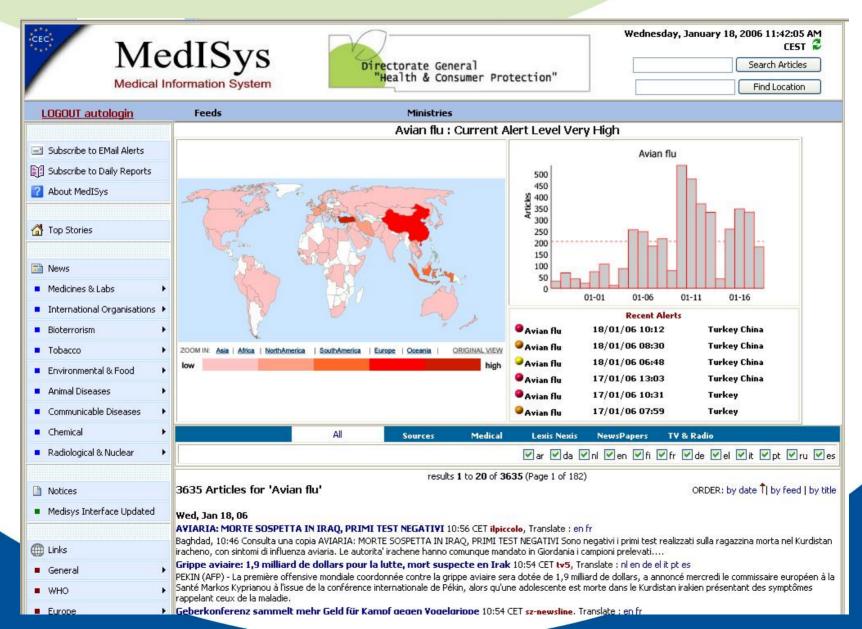
EWRS





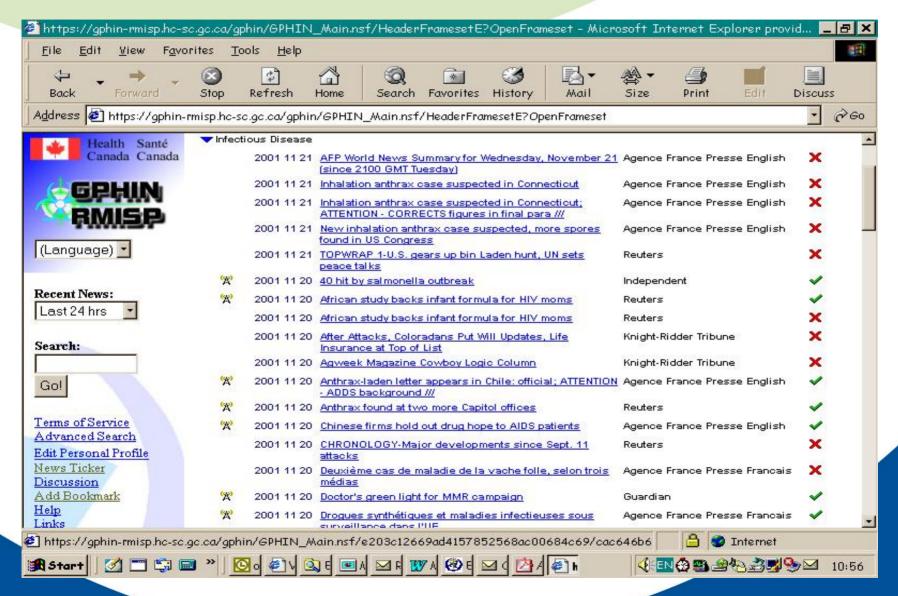
MedISys





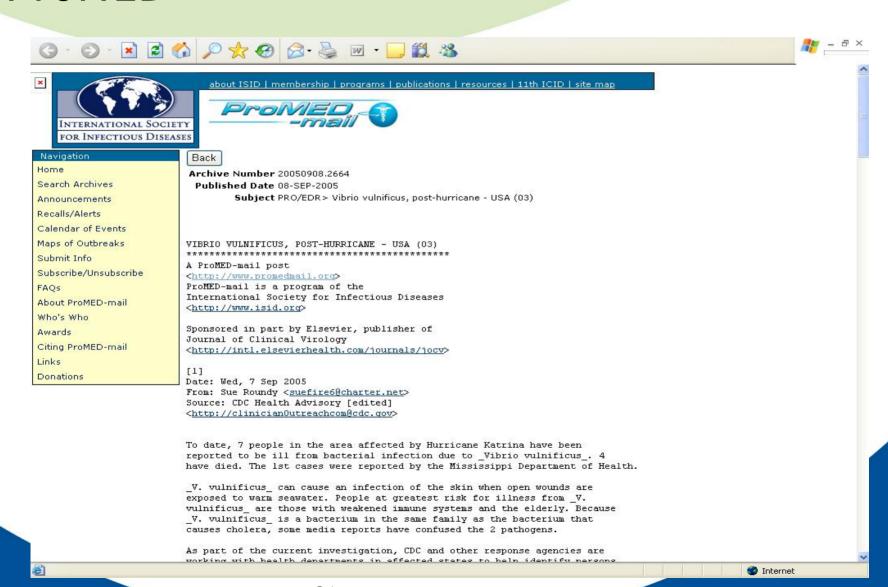
GPHIN







ProMED





Public health event verification

- Verified events
 - Source known to be verified (GOARN)
 - Public health official sources (EWRS)
- Non-verified sources
 - Media
 - Unofficial sources
- Verification process
 - Cross-checking independent sources
 - Active search for additional information

Sources of Information: First



Source of Information	%
EWRS	30
EWGLI	17
Promed	17
GPHIN	6
Public Report on Web	6
ENTERNET	6
WHO OVL	6
Info fr. WHO/non-MS Auth	2
MedISys	2
Other confidential source	2
Info from MS authority	2
Other public sources	1
Eurosurveillance	1
other DSN	1

Sources of Information: Updates



Sources Of Information	%
Public Report on Web	21
Promed	21
EWRS	11
GPHIN	11
WHO OVL	9
Other confidential source	4
Info fr. WHO/non-MS Auth	4
DGRELEX	3
Info from MS authority	3
EWGLI	3
Other public source	3
MedlSys	3
ENTERNET	2
Eurosurveillance	1
other DSN	0



Outputs

- Daily RT reports
- Weekly CDTR (customize according to the audience: confidentiality)
- Weekly EIWR
- Ad-hoc: Threat assessment and web information
- Annual reports
- Charts
- Maps



Challenges and future needs

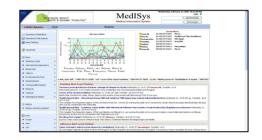
- Balance between cost of the noise vs. cost of human filtering
- How much information is enough?
- A network of experts for filtering and verification
- Standard operating procedures
- Effective communication tools
- Duplication of efforts
- How to deal with unknown diseases
- How to deal with different levels of information (temporal and/or geographical)

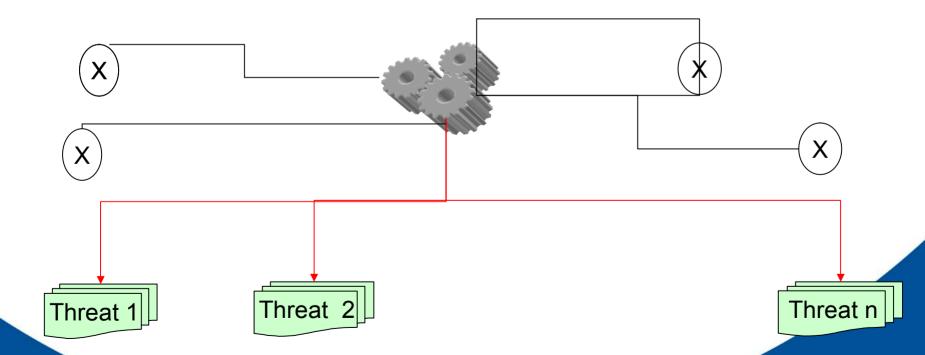


Meta robot: ProMED/GPHIN/MedISys

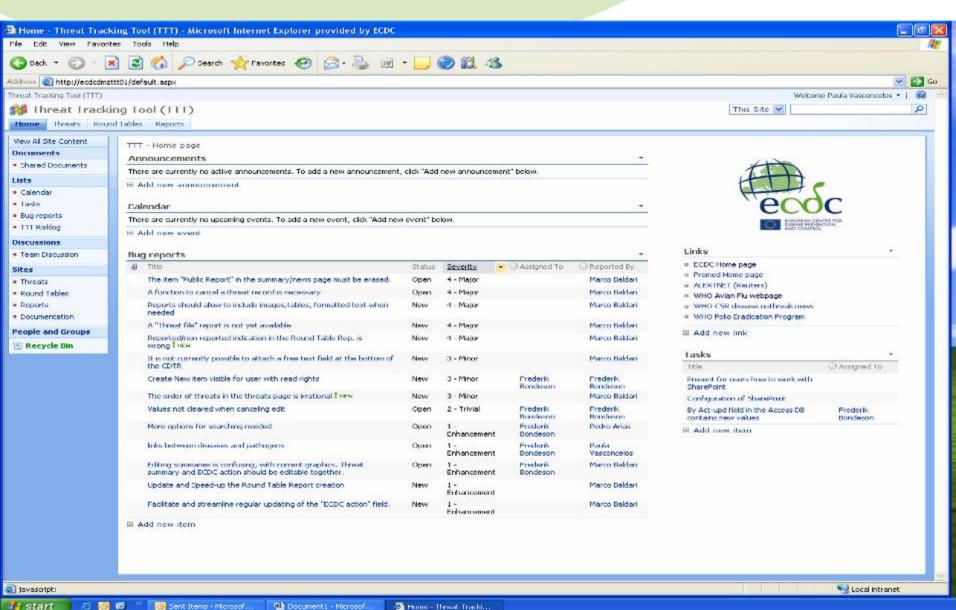










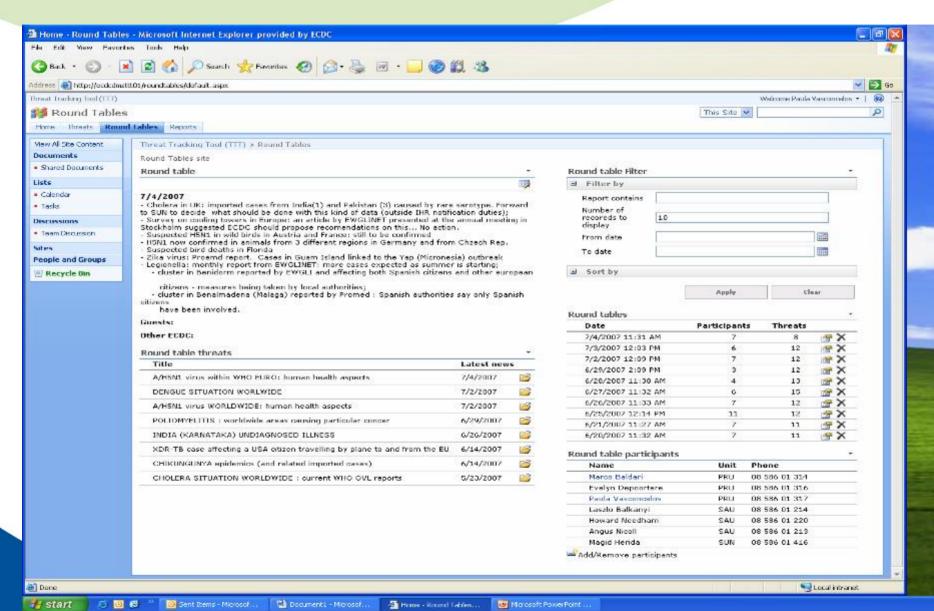


Home - Threat Tracks...

Documents - Microsof.

🥶 start







Feedback at European Level

- EC
 - EC commissioner briefing
- MS
 - Early Warning and Response System
 - ECDC threat assessment weekly bulletin
- Public
 - Eurosurveillance weekly
 - ECDC website



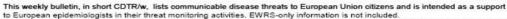
ECDC 2007_01_05 website rep.pdf - Adobe Reader

File Edit View Document Tools Window Help





ECDC/PRU - Communicable Disease Threats Report 04/01/2007



The CDTR/w contains both validated information and preliminary information under assessment by ECDC. Therefore, the bulletin is not an official source on information, nor a source of ECDC opinions.

Risks limited to Europeans who travel abroad (travel medicine issues) are not covered.

The CDTR/w may contain confidential or sensitive information and therefore, its distribution is restricted to authorised users only.

To be added to the distribution list, applicants should send an e-mail request including a brief description of their field of work to: pru@ecdc.eu.int In the object field of the e-mail the applicant should specify: "subscription to the CDTR/w".

First case/s Disease catheg./ Export Info source Disease name ID Source date Threat TITLE		countries involv.	Summi rep date	Summary report: ECDC action:			
107	Interstitial pneumonitis	Azerbaijan Turkey	04/01/2007	For a general overview, see the weekly updated "Influenza statement" on the ECDC website (www.eodc.eu.int).			
12/03/2006 Contact with infected animals			24/10/2006	In the first months of 2006, 12 human cases of H5N1, of which 4 fatal, we detected in Turkey.			
Any other 10/10/2005	A/H5N1 virus			In Azerbaijan, 8 confirmed cases, including 5 deaths occurred in February- March 2006, the last one with onset on 11 March 2006.			
	within WHO EURO: human health aspects			No human H5N1 cases were since reported in the whole WHO-EURO region, although the virus kept affecting animals (birds, mainly) at several locations throughout Europe.			
Valdated on: 13/1 Assess. on: 14/1	1112			ECDC keeps updating its influenza risk assessment online. ECDC experts and EPIET fellows took part to support missions to Turkey, Romania, Cyprus and Azerbaijan. ECDC is very actively engaged in supporting europe-wide influenza preparedness plans, through a series of initiatives including country visits.			
178	Interstitial pneumonitis	Cambodia China	04/01/2007	For a general overview, see the weekly updated "influenza statement" on the ECDC website (www.ecdc.eu.int).			
10/10/2003	10/10/2003 Contact with infected animals		04/01/2007	Total cases worldwide:			
Public Report on Web	Influenza H5N1 (human)	Egypt Indonesia		Since 2003 and up to now, WHO-confirmed cumulative H5N1 human cases worldwide were 261 of which 157 were fatal.			
15/05/2005	A/H5N1 virus WORLDWIDE: human health aspects	Iraq Thailand Viet Nam		 In 2003-2005, human cases were reported from 5 countries: Vietnam (93), Thailand (22), Indonesia (19), China (9) and Cambodia (4). In 2006 WHO retrospectively acknowledged human cases occurred in China (2003) and Indonesia (2005). 			
Valdated on: Assess. on:	PHs			 In 2006, 114 cases (79 fatal) have been reported from 9 countries: Azerbaijan (8 / of which 5 fatal), Cambodia (2/2), Djibouti (1), China (12/8), Egypt (18/10), Indonesia (55/45), Iraq(3/2), Turkey (12/4), Thailand (3/3). Vietnam reported no cases in 2008. 			
				The most recent cases - three, all fatal - were reported from Egypt on 24 Dec 2006. They all belong to one extended family from Gharbiyah province, 80 km northwest of Cairo. While being transferred to the country's designated avian influenza hospital, a 30-year-old female, a 15-year-old girl and a 26-year-old male died. The most recent death occurred on Wed 27 Dec 2006. Cases had been exposed to sick domestic ducks. The other family members have been placed under close observation. Since 1 Jan 2007, no new case reported.			

4 suspected cases recently reported from Vietnam (all members of the same family who had become sick after eating one of their chickens) later on tested negative for H5N1at the Pasteur Institute in Ho Chi Minh City. They were

The global epidemiological situation of human H5N1 infections remains unchanged. ECDC ACTION: ECDC keeps updating its influenza risk assessment online.

therefore diagnosed pneumonia.

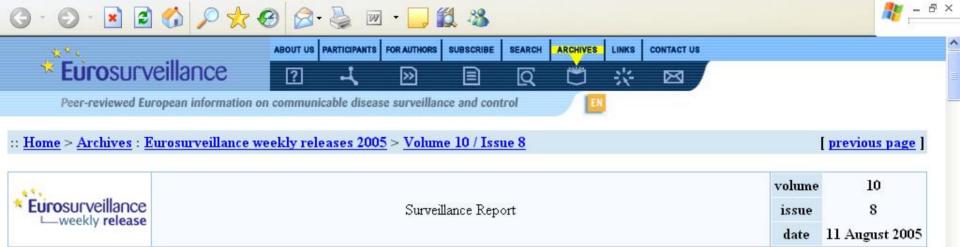


Epidemic Intelligence Weekly Report: 26 August 2005 (week 34) Not for public distribution

Please note that this report may contain sensitive information and should not be divulged outside the Commission services or the ECDC.

Prepared by SANCO-C3 Health Threat Unit in collaboration with ECDC

China, Russian Federation, Kazakhstan Tibet Commission 23 MS plus Norway reported through the EWRS measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures undertaken in response to the concerning measures u	Event / Disease	Date	Location	Description / Response	Action	Source of info	Last update	Contact in SANCO C3
Teleconference with SANCO C3, SANCO E2, EFSA and ECDC has been carried out on 23/08 to strengthen proper communication. Next teleconferences will be done on 30/08	Disease Avian influenza		Republic of China, Russian Federation, Kazakhstan	Outbreaks of influenza H5N1 in domestic geese and ducks confirmed in Novosibirsk region of Russia, and Paylodar region of Kazakhstan (WHO-European region). National authorities of both countries have reported spread of infection in birds (with deaths) in other region further westbound following migration routes of birds toward Caspian and Black sea. Bird flu (OIE confirmed H5N1) reached Novosibirsk by end of	Following last week's request of the Commission 23 MS plus Norway reported through the EWRS measures undertaken in response to the events in Russia. MS are regularly up dating their situation concerning measures underatken Life poultry and feathers import from Russia and Kazakhstan banned. ECDC starting from this week will prepare and distribute through the EIWR a risk monitoring report (see annex). The web page on influenza on EUROPA website (maps, tables, etc.) will be regularly updated on the basis of the information and data provided by the ECDC. http://europa.eu.int/comm/health/ph threats/com/Influenza/ai recent en.htm Teleconference with SANCO C3, SANCO E2, EFSA and ECDC has been carried out on 23/08 to strengthen proper communication.	EU Delegations in Asia, EWRS, WHO OIE, FAO, MedISys, EISS GPHIN,	update 26/08/05	SANCO C3 F. Karcher, M.



- 1. E-alert 9 August: Over 2000 cases so far in Salmonella Hadar outbreak in Spain associated with consumption of pre-cooked chicken, July-August, 2005
- 2. Highly pathogenic avian influenza reported in Russian bird populations
- 3. International outbreak of Salmonella Stourbridge infection, April-July 2005: results of epidemiological, food and veterinary investigations in France
- 4. Modelling study suggests pandemic influenza could be controlled at source
- 5. Healthcare workers could bring community-acquired MRSA from the US to Europe
- Varicella in Romania: epidemiological trends, 1986-2004

E-alert 9 August: Over 2000 cases so far in Salmonella Hadar outbreak in Spain associated with consumption of pre-cooked chicken, July-August, 2005

Annick Lenglet (adanyelle@isciii.es), on behalf of the National Epidemiological Surveillance Network of Spain

¹European Programme for Intervention Epidemiology Training (EPIET) and Field Epidemiology Training Programme Spain (PEAC), Centro Nacional de Epidemiología, Instituto de Salud Carlos III, Madrid, Spain

As of 8 August 2005, 2138 cases of salmonella gastroenteritis have been reported to the Centro Nacional de Epidemiología (National Centre for Epidemiology, CNE) in Spain. The reported cases have been epidemiologically and microbiologically linked to a single brand of pre-cooked, vacuum-packed roast chicken (brand A) which was commercially distributed throughout Spain.

On 28 July 2005, the Centro Nacional de Epidemiología (National Centre for Epidemiology, CNE) received a report from the autonomous region of Valencia of the detection of eight household clusters of gastroenteritis involving a total of 25 cases, all with clinical presentation of salmonella infection. On the same day, two more autonomous regions reported similar outbreaks and Agencia Española de Seguridad Alimentaria (Spanish Food Safety Agency, http://www.aesa.msc.es)

































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Recruitment

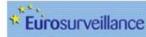
Links

How to get there?

Contact us

> An Agency of the European Union

www.europa.eu.int



Influenza update

Friday 2 September 2005

Current surveillance status 2.9.2005

Seasonal influenza across Europe

Very low levels as would be expected at this time of year in the Northern Hemisphere: see http://www.who.int/csr/disease/influenza/update/en/index.html

Avian influenza due to H5N1 among birds

The reports from the official Russian sources is that the numbers of deaths in birds is diminishing. There have been no new outbreaks in birds and no geographical spread. The sources also reported that surveillance among people around the reported bird outbreaks show no suspected cases. It should be noted that though there is some sequencing data from within Russia that would be compatible with highly pathogenic avian influenza (HPAI) no specimens have gone to reference laboratories outside Russia.

I.e. In terms of the presence of HPAI in birds the risk to the European Public from Avian Influenza in Russia seems to be currently receding The current situation of the epizootic in Central Asia does not imply any immediate threat for European citizens or poultry workers but there remains a recommendation from the Commission meeting of August 25th to ensure all preparedness plans include provision for protecting those people who may be exposed to the virus

Avian influenza (A/H5N1) among humans

As of August 5th WHO has had reported 112 cases with 57 deaths from four countries

http://www.who.int/csr/disease/avian_influenza/country/ cases_table_2005_08_05/en/index.html A few individual cases have been reported more recently by the Vietnamese authorities but these are not yet confirmed by WHO. No clusters have been reported since the spring and there are no other indications of human to human transmission

Alert Phase

The Pandemic Phase remains Pandemic Alert Phase 3 (humans infected with only very occasional person to person spread) as defined by WHO

Updates

Thur 1 September 2005 Call for expression of interest has been updated

Tues 30 August 2005 Avian Influenza and Europe Human Health Implications of Report From Finland

Tues 30 May 2005 Advisory Forum consultation on avian influenza

Thur 26 May 2005 Management board confirms new location

Events

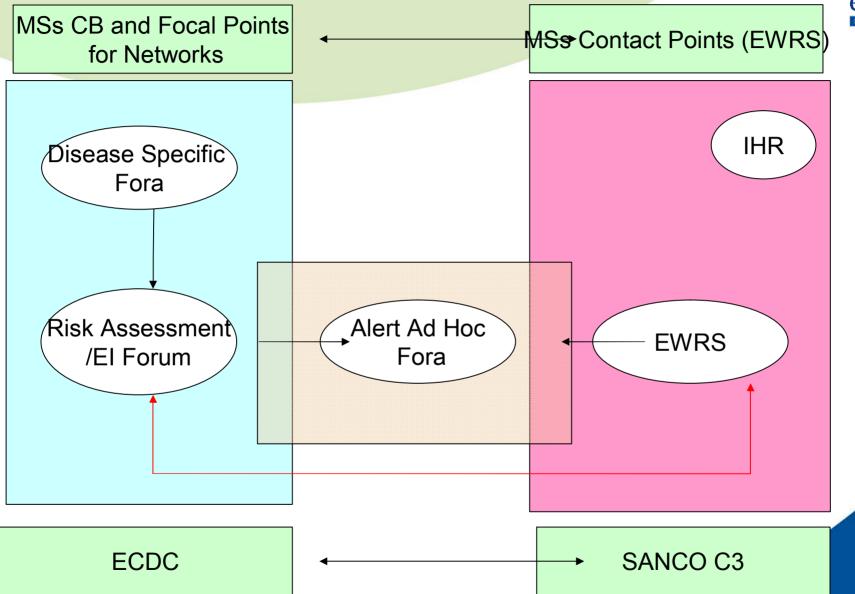
Thur 14 July 2005 Second meeting of the ECDC Advisory Forum

Frid 27 May 2005 Official launch of ECDC on 27 May 2005

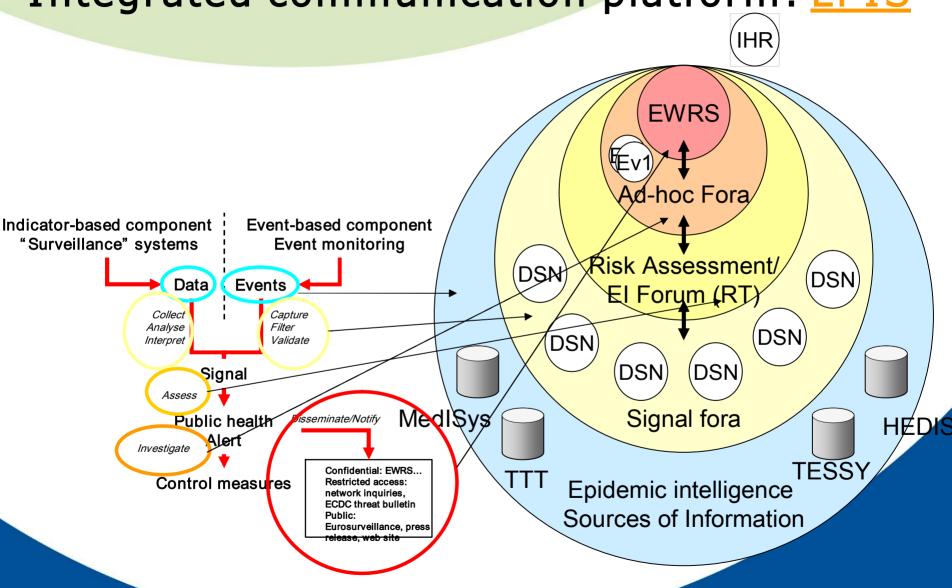
Thur 26 May 2005 Third meeting of the Management Board

Wed 18 May 2005 Coordination meeting between EPIET and ECDC on 18 May 2005





Integrated communication platform: EPT



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